A Corporate Publication of Santee Cooper

PowerSource

WINTER 2002

Water—a Vital Resource from Santee Cooper

—for power, recreation, consumption

Alcoa, South Carolina's Aluminum Giant | Turning Oil into Electricity | Educational Outreach

Explore the Water & Oil Mix

Two marvelous liquids. Water and oil are both vital to our economy, our transportation, our industrial production and for generation of electricity. In this issue of PowerSource we focus on the importance of these fluids and how they affect our lives and our operations.

The original Santee Cooper concept began with water. In fact, it was the 15,000 square-mile Santee River watershed, the second largest east of the Mississippi River. Harnessing that tremendous flow of water was accomplished in 1942 when Santee Cooper began operating as a hydroelectric utility, generating electricity and providing passage for boats through the 75-foot Pinopolis navigation lock. Watershed inflows filled the Santee Cooper lakes, which became a vital resource for recreation and the state's largest fresh water resource.

Some 40 years later, the lakes were tapped as a source of water for the Santee Cooper Regional Water System, providing treated water for distribution to more than 90,000 users served by four Lowcountry water utilities.

While oil has served as a fuel for generating electricity, it has also been the fluid for lubricating motor vehicles and the machines of industry. When oil loses its properties and has to be replaced, its disposal presents a major challenge. If improperly disposed of and poured into the environment, it contaminates our precious water supply.

Santee Cooper's Give Oil For Energy (GOFER) program, launched 10 years ago, provides a means for collecting used oil — from both motorists and machine operators — and using it to generate electricity. If you change the oil in your car, truck, boat or other equipment, you are encouraged to locate one of the more than 500 GOFER used-oil collection sites near you and dispose of it there. You will help keep our precious water supply clean and protect our environment. That will benefit all of us.

I hope that from this issue of PowerSource you will gain some additional perspective on the vital importance and relationship of two of our more important natural resources—oil and water.

H. Donald McElveen
Chairman – Board of Directors

Santee Cooper POWER

Winter 2002 — Vol. 2, No. 1
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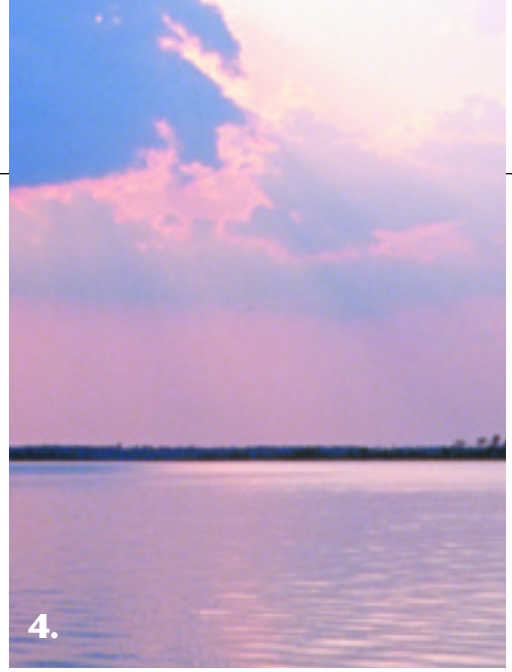


4. Water, Water Everywhere
By Willard Strong, Photography by Jim Huff

10. Alcoa Mount Holly
By Willard Strong, Photography by Jim Huff

15. How Alcoa Makes Aluminum
By Alcoa, Photography by Jim Huff

16. GOFER: Making Used Motor Oil Good to the Last Drop
By Willard Strong, Photography by Jim Huff

22. Going With the Flow at the South Carolina Aquarium
By Jerry Stafford, Photography by Jim Huff

29. Back to School
By Beth Fondren, Photography by Jim Huff

34. NewSource

35. Lest We Forget

***Cover**: 5-year old Maya Jefferson takes a refreshing drink of water, one of Santee Cooper's most abundant resources.*

Printed on recycled paper.

WATER, WATER EVERYWHERE

And every drop is a vital resource for Santee Cooper and the people of South Carolina.

A mix of fortunate geography, politics and the advancement of 20th century engineering all came together at the ideal time to make the Santee Cooper Hydroelectric and Navigation Project a reality.

To even the casual student of South Carolina history, one fact remains: The abundance of water, lots of water, set the stage that enabled Santee Cooper to be born, grow and flourish. The following was proclaimed in a promotional brochure from 1942, shortly after Santee Cooper began producing hydroelectric power on Feb. 17 of that year:

> *"Utilizing the Carolina's greatest watershed, it is like a tremendous 'funnel' through which our largest streams converge and pour their unbridled energies. Here they are set to work transforming nature's storehouse of undeveloped resources, with which the Carolinas abound, into wealth, finished products and services for the benefit of this nation."*

The "largest streams" are actually the state's great rivers: the Catawba, Broad, Pacolet, Saluda, Enoree, Tyger and finally the Congaree and the Wateree rivers, which form the Santee River.

The fortunate geography was this: the 35-foot difference in elevation between the Santee and Cooper rivers provided the necessary "head" to turn five hydroelectric turbines. The politics were right as New Deal dollars were available. Powerful U.S. Sen. James F. Byrnes

***Left**: Water funnels down from the branches, creeks and rivers of the 150,000 square-mile watershed to Lakes Marion and Moultrie, where it is retained by 41 miles of dams and dikes as South Carolina's largest source of surface fresh water.*

made sure South Carolina got its share, buttonholing everyone from the head of the Public Works Administration to President Franklin D. Roosevelt himself.

The lakes were built from 1939 to 1942, lightning speed for a project of its magnitude. When it was done, over 12,500 workers had built the project, including the Santee Dam, at 7.8 miles the longest earthen dam in the world.

On Nov. 12, 1941, the last six of the Santee Spillway's 62 massive gates were closed. The waters of the Santee River, whose average daily inflow is about 12 billion gallons per second, began filling up two reservoirs creating the Santee Cooper Lakes. With 250 square miles comprising 160,500 acres, these bodies of water are South Carolina's largest freshwater resource.

The lakes' completion culminated the federally funded $48.2 million effort. The nation's largest land-clearing project at the time, the upper lake originally was called the Santee Reservoir; the lower lake the Pinopolis Reservoir; the latter where the Jefferies Hydroelectric Station near Moncks Corner is located. The General Assembly officially renamed the lakes in 1944 for Gen. Francis Marion and Gen. William Moultrie, Revolutionary War heroes.

How much water can the lakes hold? The capacity of both lakes, ringed by 41 miles of dams and dikes, is approximately 803.5 billion gallons along 415 miles of shoreline. The counties of Berkeley, Calhoun, Clarendon, Orangeburg and Sumter comprise "Santee Cooper Country."

Lake Moultrie is the deeper of the two lakes with a maximum depth of 65 feet while Marion's deepest point is 35 feet.

The touted benefits of the Santee Cooper project by harnessing the waters flowing from the Congaree and Wateree rivers were all quickly accomplished. Hydroelectric power, inland navigation, flood control, improving public health and recreational benefits remain to this day the bedrock of what Santee Cooper was to be.

Flood control has been largely accomplished on the Santee, a river that routinely flooded an average of nine times a year. Productive farmland is now tilled, and malaria, once a scourge on the population, was practically eliminated as a public health threat.

***Top**: The Santee Cooper lakes are one of the most popular destinations for boating, water recreation and fishing in the Southeast. **Bottom**: In 1942, the Pinopolis Hydro Plant (later renamed Jefferies Hydro Station) was Santee Cooper's first source of power generation, and the adjacent 75-foot navigation lock provided access for watercraft between the lakes and the Cooper River.*

Only commercial inland navigation hasn't panned out—due largely to the evolution of the diesel-powered tractor-trailer truck and the extensive interstate highway system.

And the recreational byproduct? Good fishing was a given, but world-class fishing was not. As the home of the world's first landlocked striped bass, the Santee Cooper Lakes still command respect far and wide. Angling, boating and its associated activities represent an annual economic benefit of $222 million to the economy surrounding the lakes.

The waters of Moultrie and Marion also offered an attractive shoreline for lakeside recreation and living. In the mid-1940s, Santee Cooper began development of 52 recreational subdivisions, eventually leasing 2,929 of 3,185 residential lots and 88 commercial lots in the five counties around the lakes.

There were also 37 no-cost, quasi-public leases, making over 1,600 acres of lakeside and lake accessible land available to organizations operating in the public interest. These included Clemson Extension Service's Camp Bob Cooper, the Boy Scouts, the S.C. Department of Parks, Recreation and Tourism, S.C. Department of Natural Resources, the U.S. Fish and Wildlife Service and counties for parks, boat landings and recreational facilities.

In addition to leased lots, the waters of Lakes Moultrie and Marion attracted the residential development of 5,000 to 6,000 lots on privately owned land around the lakes.

"The economic impact of residential and commercial development around the lakes was a shot in the arm for economic growth and development in this part of the state," said G. Denton Lindsay, Santee Cooper's manager of property management. "Without the lakes, very little of this would have ever occurred."

And what else could water do? The practical application of the Santee Cooper project has changed as the needs of the region have changed. No greater example can be given than that of providing potable water to a thirsty Lowcountry.

The history of water systems in Berkeley and Dorchester counties has been a hodge-podge of largely public, but some private ownership.

One of the many private residential developments that have been constructed along the shores of the Santee Cooper lakes.

Governmental leaders in the 1970s began seriously looking at the lakes as a dependable water source.

As the population surged in the 1980s and 1990s, it became increasingly apparent that a regional approach to providing the citizenry with water was the only logical approach.

The Santee Cooper Regional Water System treatment plant provides up to 30 million gallons of water to more than 90,000 Lowcountry users.

Water tables were continually dropping, casting doubt about the future of water from wells. Aquifers simply cannot be recharged quickly enough, given the demand placed by residential, commercial and industrial uses. This, combined with increasingly stringent federal Clean Water Act standards, was the "hydro handwriting" on the wall.

In the 1980s, things began happening "on the water front." The Berkeley-Charleston-Dorchester Council of Governments released a study in 1985 showing the lakes could provide a long-term supply of water for the Lowcountry.

In 1987, the General Assembly passed legislation allowing Santee Cooper to sell water, at wholesale only, in Berkeley, Charleston, Dorchester, Clarendon and Orangeburg counties. An amendment in 1989 added Sumter County to the list.

An important stipulation of this law is that Santee Cooper may not market or attempt to sell water from the lakes, but may only respond to water utilities that may want to discuss proposed water ventures "if requested in writing."

In February 1993, construction began on the Santee Cooper Regional Water System. It is a 30-million gallons per day system taking water from Lake Moultrie, treating it and transporting it via 26 miles of pipeline. Completed in September 1994, it was formally dedicated on Oct. 20, with Gov. Carroll Campbell delivering the keynote address.

Four Lowcountry utilities formed an entity to own the $34.7 million system's capacity. These water companies are the Berkeley County Water and Sanitation Authority, the Summerville Commissioners of Public Works, the city of Goose Creek and the Moncks Corner Public Works Commission.

Collectively, they comprise the Lake Moultrie Water Agency, which provides representation on an advisory committee to make recommendations on the system's operation. By all accounts, this arrangement has forged a water system built on trust through cooperation in the nearly eight years of operation.

"Santee Cooper had the foresight to take a risk and use the state's resources in a different way to provide an essential service to current users and an untold number of future users," says Goose Creek Mayor Micheal J. Heitzler and former agency chairman. "They trusted one another and Santee Cooper. The future looks good for all of us."

"We have the capacity to satisfy area growth," says Marc Hehn, director of the Berkeley County Water and Sanitation Authority. "And growth we have had and continue to have. Berkeley County's population grew 11 percent during the last decade."

The plant can be expanded up to 150 mgd, according to plant manager Chris Hively.

"We are fortunate to have the ability to expand," says Charles Cuzzell, agency chairman and manager of the Summerville CPW. "Many utilities simply do not have that luxury and the water is of high quality."

The success of this system has spawned great interest in a proposed new system: the Lake Marion Regional Water System with a treatment plant located in Orangeburg County that would be owned and operated by Santee Cooper.

With $32.9 million in federal and state funding now in the bank account of the 4-year old Lake Marion Regional Water Agency, counties and municipalities are poised to begin an exciting new chapter in the history of water from the Santee Cooper Lakes.

A first phase could involve a $53 million, 9-mgd system to serve Elloree, Holly Hill, Santee, St. George and possibly Manning. A 31-mgd system could eventually serve seven municipalities in six counties via 54 miles of pipeline. The price of the larger system is $150 million, so more funding will be necessary.

An exciting aspect of the proposed new system would be the delivery of a water line to feed the I-95 corridor and particularly the interstate roadway's intersection with I-26. It is probably one of the nation's few interstate highway intersections lacking a water infrastructure system. A water line arrival could create an oasis for commercial and residential development along the corridor from Santee to Walterboro.

"Water is a big and important part of Santee Cooper's past, present and future," says President and CEO John Tiencken. "The appropriate use of water from these lakes is an example of how a resource created 60 years ago continues to serve the people of South Carolina."

Alcoa Mount Holly

World's most efficient aluminum plant eagerly fills the role of local hero.

From the seemingly endless half-mile line of electrolytic cells flows molten aluminum—the shiny metal that has changed the face of economic growth in the Lowcountry.

Nestled on 6,500 acres of property between Goose Creek and Moncks Corner, is Alcoa Mount Holly. Viewed from the entrances on U.S. Highways 52 or 176, the passing motorist likely wouldn't know the role this aluminum-making giant's plant plays in the economic well-being of the Lowcountry and South Carolina.

Alcoa Mount Holly's story in Berkeley County for over two decades is a textbook example of how to attract a top-notch corporate citizen, keep it, and have even greater things on the horizon.

***Left**: Bathed in late afternoon sunlight, aluminum billets await shipment from Alcoa Mount Holly. **Top**: Worker taps one of the 360 electrolytic cells, each yielding about 3,600 pounds of molten metal. **Bottom**: Mount Holly mark gets stamped into each aluminum casting.*

Mount Holly employees are the most productive in Alcoa's worldwide smelter system.

Their story is one of transition—the transition of South Carolina's economy from farming and textiles to manufacturing and in this case, advancing technology in manufacturing.

"This is one of the more productive if not the most productive aluminum plants in the world," says Alcoa's Paul Campbell, president of the Southeast region of Alcoa Primary Metals. "As measured in man-hours per ton of metal produced, Mount Holly's employees are the most productive in Alcoa's worldwide smelter system."

The story begins in 1980 when the plant opened as Alumax of South Carolina. In July 1998, Alumax was acquired by Alcoa, formerly known as the Aluminum Company of America. Based on revenues, Alcoa is the largest metals company in the world.

To call them a multinational corporation almost seems an understatement. They have 350 operating locations in 37 countries and employ 142,000 people in the business of mining, refining, smelting, fabricating and recycling aluminum in just about all its forms. Revenues last year were $22.9 billion.

There is no standing still at Mount Holly. They are growing their product output. Campbell says plans are underway to put closure on a 25 percent production expansion, which began in 1996. The annual plant output will be at 225,000 metric tons once this phase is complete.

"We began a $20 to $30 million expansion in 2001," Campbell says. "The replacement cost for the investment in Mount Holly would total about $1billion, and Alcoa's willingness to continue their investment in Mount Holly shows the confidence they have in us here."

Alcoa Mount Holly is one of the leading corporate citizens in Berkeley County. For example, several million dollars are spent annually on training, life skills and work skills.

Making aluminum might not seem like it lends itself to the phrase "high tech." But Campbell points out that of their 600 workers, 400 have personal computers at their fingertips.

Molten aluminum is poured from a crucible into the pre-cast furnace where it is mixed with alloys to meet varied specifications.

"We have three people from Trident Technical College onsite supporting our Learning Center. We expect this level of investment in our employees to continue, as it makes the plant more viable in the marketplace. We consider Trident Tech and the Berkeley County School District's adult education program to be our partners in this effort."

Alcoa Mount Holly is one of the leading corporate citizens in Berkeley County. Employees are a generous lot and show a genuine commitment to their Lowcountry communities. They run the annual Trident United Way campaign themselves, placing second in the Leadership Giving category the last two years. In the most recent campaign, over 13 percent of all employees gave $1,000 or more.

When it comes to blood drives, donors rolled up their sleeves last year and gave 400 pints of blood. After the Sept. 11 terrorist attacks, a blood drive was held at the plant "and the Red Cross ran out of bags," says Campbell whose own list of civic involvement is quite extensive.

"Good compensation, combined with positive employee practices results in a dedicated workforce, so we do pay well," he states.

"We want stability in the workplace," says Campbell. "Sixty percent of the employees have been here from the time we started 21 years ago.

The management style at Mount Holly is as simple as the firm's mission statement: return on investment, quality to customers and opportunities for employees.

"Our employees expect much out of us, and we expect much out of them," says Kerry Farmer, the plant manager. "They have never failed to deliver whatever has been needed. Our focus is to work together as one unit, to be honest with each other, and to listen to each other. We're not without shortcomings, but out of this focus comes improvement."

He and Campbell started out together at the plant, he as the pot room superintendent and Campbell as the carbon plant superintendent.

As with any large-scale operation, there have been bumps in the road. Hurricane Hugo in September 1989 presented the plant its biggest challenge. But it was perhaps their "finest hour," as 100 percent capacity resumed 68 days after production was lost.

The aluminum leaving Alcoa Mount Holly on flatbed tractor-trailer trucks generally stays in the Southeast. The automotive industry is a great

Plant Manager Kerry Farmer

consumer of aluminum products, and the aluminum content of cars has increased from about 100 pounds only a decade ago to about 300 pounds today.

"It's light, safe and strong," Campbell says. "That makes it very attractive for automobiles and lots of product goes to foundries for cylinder heads. We also make the aluminum ingots used to make rotors in electric motors made by GE and Emerson. Beverage cans for Anheuser-Busch, the foil in Wrigley's chewing gum and Alka-Seltzer are all products that use our aluminum."

It takes a tremendous amount of power to make a pound of aluminum. Just how much? This year's power budget is $100 million and consider this: About 15 percent of Santee Cooper's entire generating capacity goes to Alcoa Mount Holly. They are the largest of Santee Cooper's 34 industrial customers.

Paul Campbell, president of the Southeastern region of Alcoa Primary Metals

"We use about $15,000 worth of electricity from Santee Cooper every 60 minutes," says Campbell of their 24 hours per day, seven day a week operation. "Because of aluminum's recyclability, it's a great store of this energy and has positive life-cycle environmental benefits. Our production process must have reliable power, and Santee Cooper does a great job of providing it. We've made a good supplier-customer team over the years."

The plant boasts a nearly nil waste stream, actively promoting recycling of newspapers, plastic, and yes, aluminum. Used motor oil is also collected as part of Santee Cooper's Give Oil for Energy Recovery or GOFER program.

Alcoa has always been keen on protecting the environment at Mount Holly. The plant has won statewide and Alcoa worldwide awards for its waste reduction and pollution prevention programs. A new "inert anode" process on which the company is working shows promise of improving its environmental performance even more. It's another example of Alcoa's commitment to lead the industry in limiting emissions.

Says Campbell, "The process we use now is about as clean as you can get, but this new method is much cleaner and we're very excited about it."

If you pass by Alcoa's Mount Holly entrances on U.S. Highway 52 or U.S. Highway 176, you now know a little about what's going on inside a world-class aluminum plant.

"We believe in continuous improvement," Campbell says. "You're either green and growing or ripe and rotting. We believe we have a bright future in Berkeley County."

How ALCOA Makes Aluminum — adding value, from the ground up

Aluminum is the most abundant metallic element in the earth's crust — and one of the more difficult to extract. It is always found locked in combination with other elements such as oxygen or sulfur, as part of various aluminum-bearing minerals — notably bauxite. Once converted into its metallic state, aluminum is like no other material on earth. Its future is bright because its combination of useful properties is extraordinary.

A spent anode is removed from one of the electrolytic cells, part of an around-the-clock process.

It all Starts With Dirt.

This kind of dirt is called bauxite ore. If you were looking at a four-ton truckload of it and someone asked, "What can you make out of that?"—you would think, "Not much. Maybe the base for a driveway."

White Powder, White Metal

But from four tons of bauxite, it's possible to refine about two tons of alumina — a powdery white oxide of aluminum. And from those two tons of alumina, we can smelt a ton of aluminum. Smelting aluminum was the invention that launched Alcoa in 1888.

Miracles by the Ton

A ton of aluminum is enough to make the cans for over 60,000 Cokes, Pepsis, or Buds. Enough to make the spaceframes for seven full-size cars. Enough to make 40,000 computer memory disks, capable of storing all the books ever published. All from a truckload of dirt. It's almost magical. And we're proud to have the magicians who can pull it off.

Step by Step

Here, in brief, is how it all happens — how we start with dirt and, step by step, keep on adding value until we are able to produce aluminum.

Mining

Bauxite is an ore rich in aluminum oxide, formed over millions of years by chemical weathering of rocks containing aluminum silicates. It was first mined in France and has since been found in many locations around the world. Today, most bauxite mining is in the Caribbean, Australia and Africa.

Refining

To turn bauxite into alumina, we grind the ore and mix it with lime and caustic soda, pump this mix into high-pressure containers, and heat it. The aluminum oxide we're after is dissolved by the caustic soda, then precipitated out of this solution, washed, and heated to drive off water. What's left is the sugar-like white powder called alumina, or aluminum oxide (Al_2O_3).

Smelting

Alumina becomes aluminum in an electrolytic reduction process known as smelting. The alumina is dissolved in a cryolite bath inside large, carbon-lined cells called pots. When a powerful electric current is passed through the bath, aluminum metal separates from the chemical solution and is siphoned off.

Fabricating

Aluminum from the smelting pots goes into furnaces for precise mixing with other metals to form various alloys. The metal is purified in a process called fluxing, then poured into molds or cast directly into ingots. Further fabrication may include casting, rolling, forging, drawing, or extruding—some of the ways Alcoa and its customers make thousands of different finished products, from beverage cans to cars to jet aircraft.

Recycling

Aluminum offers a powerful economic incentive for recycling. Of the 100 billion or so beverage cans produced annually in the U.S., roughly two-thirds are returned for recycling. So is 85–90 percent of the aluminum in cars.

The Advantage: Everybody Wins.

As cars use more aluminum, they weigh less, burn less fuel, and reduce emissions. Recycling also saves 95 percent of the energy it would take to make new metal from ore, and it lessens the need for solid waste disposal.

***Source**: Alcoa. For additional information, visit www.alcoa.com*


GOFER

GOFER: Making Used Motor Oil Good to the Last Drop

Oil. The petroleum product that provides necessary lubrication for motorists presents a unique challenge once it has done its job and expended its usefulness. It has to be properly disposed of. That's the law in South Carolina. Santee Cooper provides a vital environmental service by collecting it and converting it into energy.

Santee Cooper began collecting used motor oil from the public a decade ago—an effort that has grown to the largest endeavor of its type in South Carolina.

It's called Give Oil for Energy Recovery or GOFER. It all began in Moncks Corner at Santee Cooper's corporate headquarters. On July 30, 1990, five gallons of used motor oil were ceremoniously poured into a 275-gallon tank before a crowd of 50 onlookers. The first GOFER site became operational.

The idea for GOFER came from the utility's personnel working in the Environmental Services department. They were looking for a way to observe the 20th anniversary of Earth Day in April 1990. Why not collect used oil from the public and see the response—or lack of it.

In this scene from a Santee Cooper TV commercial, the GOFER mascot is surrounded by young admirers whom he reminds about the importance of properly disposing of used motor oil so the state's vital water resources will be protected from contamination.

John Grant shows his two sons, Aaron, 5; and Daniel, 9; how to make a GOFER deposit.

Over a two-day period in April 1990, about 650 gallons were collected at two sites in Berkeley and Horry counties. This showed the oil was indeed out there along with the need for proper disposal. Surveys showed that a growing number of individuals were "do-it-yourself" (DIY) changers, removing used oil from their automobiles, trucks and other vehicles. There was also a large volume of used oil available for collection from industries, state-owned vehicle fleets and other users. It all had to be safely disposed of in an environmentally sound manner and the GOFER program provided a way to meet that need.

In June 1991, Santee Cooper announced the program would go statewide. Working with local governments and electric cooperatives, Santee Cooper set about the business of installing oil collection tanks throughout South Carolina.

Since the GOFER program began, approximately 10 million gallons have been collected. The oil is transported by Santee Cooper to its Jefferies Generating Station near Moncks Corner where it is converted into electric power.

Most people can understand the environmental harm used oil can do. Used oil is messy stuff. One gallon can contaminate 1 million gallons of fresh water and is harmful to the soil, wildlife and other organisms. It's just common sense to dispose of it properly and that is what GOFER does.

The GOFER program has helped Upsate automaker BMW further its commitment to pollution prevention and continual improvement, according to Senior Environmental Engineer Maresa Williamson.

But there's energy in that oil. Two gallons of GOFER oil can be turned into enough electricity to run the average home for one day. GOFER oil collections since 1990 have produced enough power to run 1,000 homes for 10 years.

There is no excuse to dump oil because no matter where you live, there's a GOFER site near you.

"The GOFER program has evolved from seven DIY collection sites to about 1,500 DIY and industrial-commercial collection sites," said Technical Associate Frank Coffey who administers the GOFER program. "It's truly a program that places Santee Cooper in an important statewide role."

In the early years, Santee Cooper actually gave the 275-gallon collection tanks to county governments just starting their recycling efforts.

"A population-ratio formula was used to determine the number of collection tanks the GOFER program would provide to each county," Coffey said. "Any additional tanks would be obtained on their own. Now with the public demand to recycle, all county and some municipal branches of government have developed recycling centers with larger capacity collection tanks funded with grant monies from the S.C. Department of Health and Environmental Control."

The S.C. Solid Waste Management Act of 1991 placed a 2 cents per quart surcharge on new motor oil sold in the state. This fund has allowed many counties to purchase tanks. The '91 act also outlawed the improper disposal of used oil and provided for penalties, effective in '92.

GOFER Technician Ernest Winningham pumps used oil from a North Charleston industrial customer's storage tank.

"Prior to GOFER coming along, there was no organized effort in South Carolina to collect used oil from the public," said Coffey. "A lot of oil was simply poured on the ground or in ditches because there was no convenient way to get rid of it.

GOFER is one of Santee Cooper's greatest success stories, and a prime benefit of this program is the protection of South Carolina's environment.

***Below**: GOFER used oil is delivered to Jefferies Station near Moncks Corner where it is used as the fuel for generating electricity in Units 1 and 2.*
***Bottom**: Map shows the more than 1,500 GOFER collection sites and pickup points statewide.*

When the GOFER program began, DHEC estimated 1 million gallons of oil were improperly disposed of each year in the state.

Santee Cooper also worked with the S.C. DHEC's Office of Solid Waste Reduction and Recycling. Out of that relationship, Santee Cooper was a founding member in 1992 of the S.C. Used Oil Partnership, advancing the awareness of the proper disposal of used oil. In addition to DHEC and Santee Cooper, other members include the S.C. Petroleum Council and the S.C. Department of Transportation.

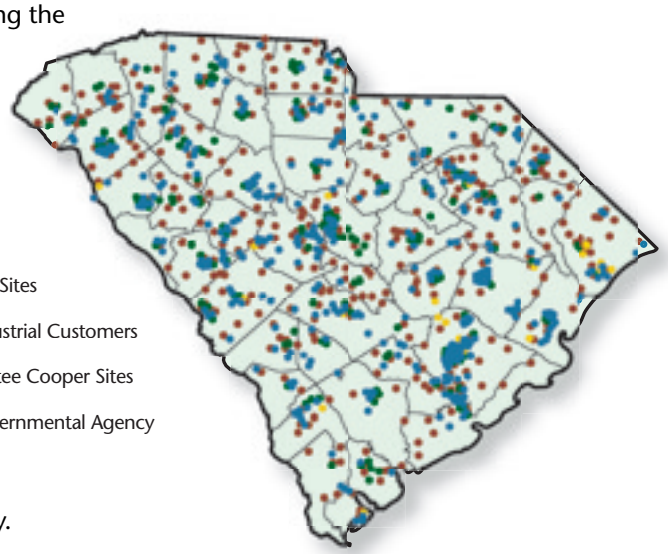
The creation of the GOFER character was also a product of the program. He's a crowd favorite, particularly among the younger set at events throughout the state.

The program has won nearly a dozen awards, and according to DHEC figures, Santee Cooper has consistently collected about 83 percent of DIY oil in South Carolina reported annually.

Quick-change lube outlets and a few service stations make up the rest.

Said Coffey, "Management has fully supported the GOFER program, and has paved the way for the GOFER program to expand as public support and participation has increased. Currently, the fleet of collection vehicles consists of four vacuum trucks that can transport between 3,000 and 4,000 gallons each. Also, there are four tanker trailers in the GOFER fleet that can be used to collect between 6,000 and 8,000 gallons per trip.

"In addition to the 500 DIY sites and the 1,000 industrial and commercial sites



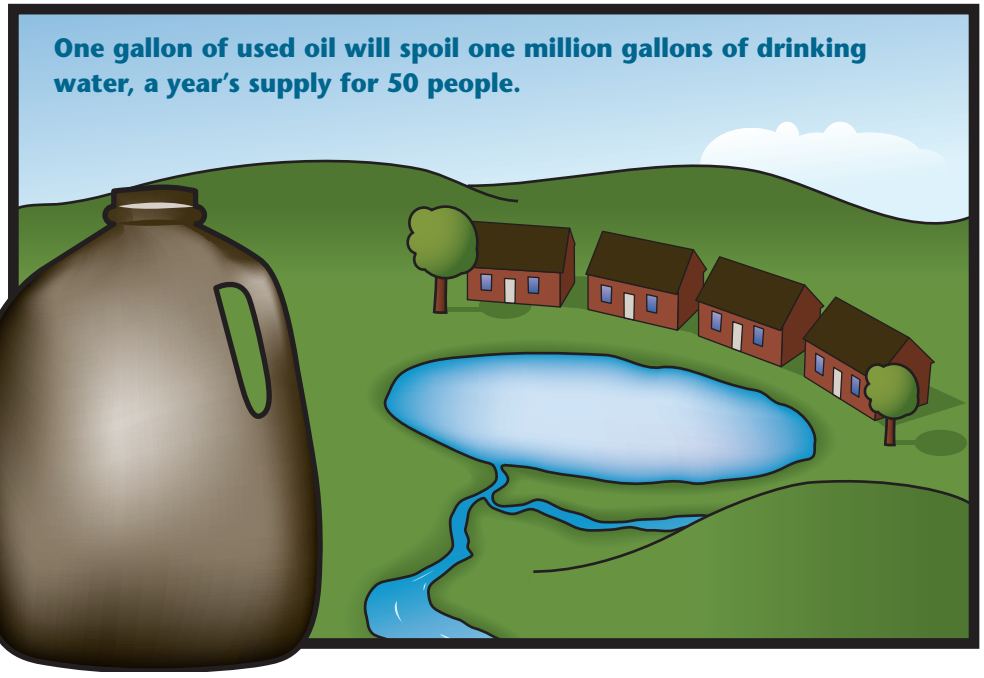
from which we collect used oil in the state, we added 281 new sources to our collection routes in 2001. We collected a total of 2,103,648 gallons of used oil in 2001."

Do-it-yourself oil changers statewide have adopted the GOFER habit and made it the largest collection process statewide.

Some of South Carolina's government agencies and largest industries have also realized considerable benefits and cost savings through their participation in the GOFER program.

Upstate automaker BMW Manufacturing Corp. has contributed all of its used oil to this program since it began operations near Greer in 1994. "The GOFER program has helped us to further our commitment to pollution prevention and continual improvement," said BMW's Senior Environmental Engineer Maresa Williamson.

The GOFER mascot is popular among school groups such as this outing at Old Santee Canal Park in Moncks Corner.



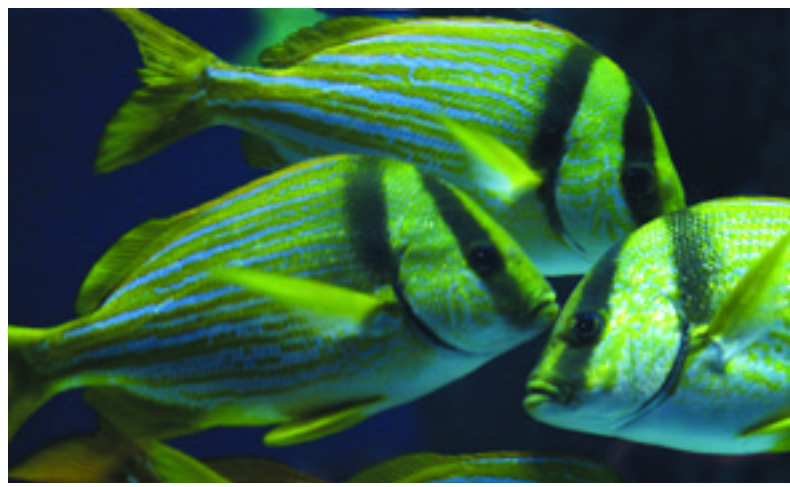
"The GOFER program has afforded BMW the comfort of knowing that this waste is finding a very safe and beneficial end of life."

GOFER is one of Santee Cooper's greatest success stories, and a prime benefit of this program is the protection of South Carolina's environment.

For more information about the GOFER program and the location of the most convenient used motor oil collection sites, call 800-753-2233 or visit the GOFER Web site at www.scgofer.com

Going With the Flow at the South Carolina Aquarium

Santee Cooper-sponsored exhibit provides a refreshing perspective of the state's rivers and reservoirs.



One of the more popular attractions at the South Carolina Aquarium in Charleston, which opened to the public in May 2000, is the Rivers & Reservoirs exhibit, part of the Coastal Plains Gallery.

Santee Cooper is one of the corporate sponsors of the unusual display that showcases the estuaries, waterways and reservoirs that make up the state's freshwater system.

Each month, more than 100,000 visitors parade through the aquarium, with most streaming through the exhibit that traces the flow of water from the mountains to the sea. The aquarium's exhibit path leads visitors through five major regions of the Southeast Appalachian Watershed as found in South Carolina: the Blue Ridge Mountains, the Piedmont, the Coastal Plain, the Coast and the Ocean.

Meandering like a stream through the display, visitors are able to trace the water's flow through the state — beginning as raindrops falling in the mountains and uplands, dribbling into freshets, feeding small brooks and streams, then swelling to rivers that flow into the manmade reservoirs.

From the reservoirs such as the Santee Cooper Lakes, the exhibit traces the discharges as they widen into brownwater and blackwater swamps and finally feed into the bays, inlets and harbors that shape the South Carolina coastline.

A family is mesmerized by the movements of fish in the "big tank."

In each of the exhibits, the water resources are realistically recreated with the geologic strata and indigenous plant life. More importantly, the exhibits of ponds, streams and waterways are inhabited with fish that live and thrive in those systems.

In addition to the freshwater exhibits, tanks and displays, visitors are provided close-up views of an array of fish and salt-water creatures that swim, crawl and inhabit the big pond. Numerous tanks, exhibits and displays create constant ooohs and aaahs from the flow of visitors who gaze, gawk and appreciate the array of sharks, tropical fish, turtles and other aquatic creatures.

Throughout the aquarium, the sight and sound of flowing water and the sculptural interpretation of the junction of land and water provide a symbolic invitation to journey through the 93,000-square foot facility.

The aquarium features more than 60 exhibits and displays more than 10,000 living organisms, representing more than 500 species. It is home to otters, birds, fish, turtles, venomous snakes, other reptiles and amphibians, aquatic invertebrates and insects.

A journey through the aquarium begins in the architecturally impressive 300 foot long Great Hall and moves on to the Mountain Forest Exhibit, a remarkable walk-through habitat depicting a mountain ravine with a cascading waterfall. It is a realistic representation of a South Carolina mountain gorge.

***Left**: A young visitor exchanges high-fives with a diver feeding fish in one of the aquarium tanks.*
***Right**: A striped bass from the Santee Cooper Lakes is the dominant fish in the freshwater tank of the Coastal Plains Gallery.*

Moving through the mountain forest, the presence of cool air and mist, typical of the mountain environment, and the scale of the terrain enhance the authenticity of the setting. At fingertip level, rainbow and brook trout skitter through the rapid currents and along the windows that provide splendid underwater views of their actions and their habitat.

Small terrariums built into the Mountain Forest recreate a series of habitat niches, including a ledge, crevice, vernal pool, seep and hollow log. Within these exhibits live salamanders, toads, spring peepers, bog turtles, water striders and diving beetles.

As you move from the Mountain Forest into the Piedmont Gallery, the South Carolina terrain drops successively through the rolling hills and valleys of the Piedmont plateau. The region is characterized by its dammed rivers that form vast reservoirs to provide the state with hydroelectric power.

Exhibits explain how damming of streams has regulated flooding and added recreational opportunities for fishermen and boaters. These impoundments include the familiar manmade lakes through the central area of the state, including Lakes Greenwood, Murray, Wateree and finally funneling down into Santee Cooper's Lakes Marion and Moultrie.

***Top**: Baby alligators are one of the popular attractions in the Lowcountry habitat.*
***Bottom**: Tropical fish are silhouetted against the backdrop of Charleston Harbor.*

The Santee Cooper-sponsored Reservoir Exhibit features freshwater fish that inhabit the lakes and rivers of South Carolina.

As visitors stream from the Piedmont Gallery, into the Coastal Plains Gallery, they are introduced to the state's largest manmade reservoir, the Santee Cooper Lakes.

Adults gaze at the parade of fish and the faces of small children press against the glass as familiar species such as striped bass, catfish, crappie and bream swim back and forth and through underwater natural structures in the 5-foot window of the reservoir tank.

Colorful panels over the display describe the redbreast sunfish, black crappie, largemouth bass, striped bass, catfish and threadfin shad. An information panel for the displays tells the story of South Carolina's waterways and reservoirs and the aquatic life they support.

South Carolina's rivers once flowed wild and free. Today dams control that flow. Built to give electricity to growing communities, dams also create lakes and prime fishing habitat. Big bass nest in the shade, trout cruise deep holes and bluegills hover near bridges covered by lake waters.

The headers and copy blocks that accompany each of the aquarium's waterway exhibits provide descriptive prose that paints vivid word pictures of the state's fisheries and waterways. The sections on Coastal Plains, Freshwater Marshes and Brownwater Swamps are examples of the poetic approach used for telling the story of South Carolina's fisheries.

The Coastal Plains—where land and water spawn vast wetlands

Rivers slow as they spill onto the gently sloping land between the Piedmont and the coast. This Coastal Plain covers nearly half of South Carolina. As rivers fan out across the land, they create miles of swamps and marshes.

In misty swamps, waterways course through a maze of giant, cathedral-like trees. At the edge of a marsh, a mother alligator covers the nest that shelters her eggs. In shallow, mineral-poor bogs, pitcher plants capture and digest insect meals.

Freshwater marshes harbor secret lives

Along flooded rivers, freshwater marsh plants take root. Tall, spiky rushes reach up through the shallows to bask in the sun's golden glow, while lanky reeds and wild rice thrive in deeper water. Amid tangled roots, fish seek out insects, turtles snap up fish, and alligators wait and watch.

Brownwater Swamp — a river's watery embrace

During winter and spring, Piedmont rivers spill onto the Coastal Plain, swamping bottomland forests with muddy brown water. Floodplain waters may rise 5 to 14 feet. Silt and nutrients from frequent floods nourish grand old trees bald cypress, loblolly pine, oaks and elms.

The aquarium also uses the words penned by notable writers, artists and naturalists to share perceptions and understanding about South Carolina's waterways. In 1937, for instance, South Carolina poet laureate Archibald Rutledge described the state's treasure of waterways with great emotion.

"There is also a peculiar noise, a continuous sibilant whisper, an urgent sort of rustling of the submerging marsh, with occasionally a roar from a breaking bank, or the sudden plunging of the flood through a high spillway."

A visit to the South Carolina Aquarium is an educational and sensory experience and an adventure in discovering the state's great wealth of fisheries and water resources. It is a show and tell experience with a diverse array of fish-filled tanks, recreated natural areas, and endless graphic and visual displays.

"Exhibit sponsorship and involvement with the South Carolina Aquarium fits well into Santee Cooper's educational and environmental outreach programs," says Glen Brown, manager of community relations. "This provides some valuable enrichment opportunities for school children from throughout the state."

The responses from visitors of all ages to the aquarium reflects on its value as an educational and enlightenment resource.

According to one awe-struck patron, "Wow, I never knew there was so much to see, Dad. We've gotta come back."

The coral reef display is one of the South Carolina Aquarium's favorite viewing areas and a frequent backdrop for receptions and social events.

Note: The South Carolina Aquarium is open daily from 9 a.m. to 5 p.m. Admission is $14 for adults, $12 for students 13–17 yrs., $7 for youth (4–12 yrs.), and $12 for senior citizens (62+). The aquarium is located on Charleston Harbor next to the Charleston Maritime Center. Information can be obtained by calling (843) 720-1990 or by visiting the Website at www.scaquarium.org


LILLY'S PURPLE PLASTIC PURSE
KEVIN HENKES

Back To School

Santee Cooper employees volunteer to help students prepare for the real world.

A shy, freckle-faced student sits down at a desk across from a Santee Cooper volunteer who flips a card over. It reads "7x8." The volunteer asks, "How much?" Grinning ear-to-ear, the excited third-grader blurts, "56!"

This one-on-one interchange between a knowledge-thirsty student and a caring-sharing utility employee is typical of the one-on-one, student-focused relationship that is the greatest strength and at the heart of a broad-based educational outreach program conducted by Santee Cooper.

Santee Cooper and its employees have a strong commitment to supporting educational outreach in the state. Throughout the years, outreach efforts have grown. To date, Santee Cooper partners with 12 schools in Berkeley, Georgetown and Horry counties.

***Left**: Sr. MIS Analyst Renee Tedder assists a student in discovering the pleasure of reading found in "Lilly's Purple Plastic Purse." **Top**: Financial Analyst Faith Williams helps her "Math Buddy" learn about how numbers work.*

Through these educational outreach programs, Santee Cooper works closely with the schools to enhance programs, share resources and provide one-on-one support and assistance to students with special needs.

These services reach out to individual students to provide assistance in helping improve reading and math skills, communications and decision making that affect life after graduation. Here's a sampling of the things Santee Cooper and its employees do to support the schools:

"Education's purpose is to replace an empty mind with an open one."
—Malcolm S. Forbes

At Berkeley Elementary School in Moncks Corner, employees help students improve reading skills in the Read with a Child program. Each week, some 50 employees board a yellow school bus and trek about five mile across town to spend their lunch hour with a child in this one-on-one reading program for first-graders.

It was started three years ago by a Santee Cooper employee because employees wanted to get involved in a project that would have a direct impact on children. There was little doubt that the first-graders loved their special one-on-one time. But employees also benefited.

"What we had not considered was how much the first-graders would brighten our day," said Susan Jackson, principal engineer at Santee Cooper. "To see their smiling faces and excitement over reading their books is awesome. I'm not sure who gets more excited—the children or us, the volunteers."

On Celebration Day at the end of the program, each volunteer presents their first grade reader with a book of their own.

At another Berkeley County school, employees focus on mentoring. The Lunch Buddies program at Berkeley Middle School in Moncks Corner pairs a sixth-grader with an adult volunteer.

Through the year, the employee volunteer has lunch with the student and just listens to what is on his or her mind. Many of these children come from single-parent homes, fractured families and situations not providing a sufficient amount of attention and family interaction. Over 30 Santee Cooper employees have continued to participate in this program since 1999.

Santee Cooper's Engineering Associate Lisa Napier started this program because of the impact it can have on a child's life. "The impact we have on these young lives from hours of learning and bonding is immeasurable. We see firsthand how we can be a good influence on an adolescent, which is a critical time in a young person's life," said Napier.

At Berkeley Intermediate School, just a stone's throw from Santee Cooper's corporate headquarters in Moncks Corner, students hone their math skills with the aid of about 30 employees. The Math Buddies program provides one-on-one instruction for 30 minutes each week throughout the year. These volunteers visit the classrooms and study centers to help students learn methods and strategies for understanding how multiplication works.

Training Coordinator Sandra Starks shares time with two of her "Lunch Buddy" students as both mentor and friend.

Students climb to the top of the Pinopolis Navigation Lock on a field trip to Jefferies Generating Station.

On the first day when the "Buddies" meet, each student is presented with his or her very own set of flashcards provided by Santee Cooper. Working one-on-one with the students, the employee volunteers use flashcard drills and number games to help the students understand the basics of mathematics and gain confidence in their new knowledge. Since the program began in 2000, about 250 third-grade students have

SCADA System Supervisor Wayne Ahl provides one-on-one instruction to an eager learner.

been touched through this program each academic year.

Said coordinator Nan Faulk, financial analyst at Santee Cooper, "You think its not working, that they're not catching on, then all of a sudden you can see their eyes light up as they begin to make the right connections, gain confidence in their ability and respond correctly. It makes it all worthwhile."

Head about 40 minutes northeast to Georgetown County, and you will find employees from Winyah Generating Station reaching out to help Sampit Elementary School. Their support includes helping with the annual Spirit Day; holding a cookout for the faculty and staff on Appreciation Day; reading with the children in the classroom; providing assistance for the building and grounds; allowing the school's staff to use Winyah Station's facilities for development; and building picnic tables and theater props.

In the Grand Strand area of the state, Santee Cooper employees have partnered with the administration and students at Loris Elementary school to help provide supplies to students. Teachers began to notice that many students did not have dictionaries. Santee Cooper stepped in and provided hundreds of dictionaries to the school over the past three years.

"There is a large number of children who simply cannot afford the basic school supplies needed in the classroom. This is where Santee Cooper helps out," said Santee Cooper's Senior Customer Service Representative Linda Pickens.

Other schools partnering with Santee Cooper are Cross Elementary School and Cross High School, Westview Middle School (Goose Creek), Macedonia Middle School, Waccamaw Elementary School (Pawleys Island), Conway Elementary School and Loris Middle School.

The partnerships with Berkeley, Macedonia and Loris middle schools are part of Powerful Partners, a program established by the S.C. Chamber of Commerce. As part of this program, Santee Cooper steps up their involvement to work with the schools in identifying issues that may be keeping teachers from teaching and students from learning.

Education is critical to the improvement of the quality of life for the people of South Carolina. Educational improvement is a priority for the entire state, which experiences lower than national average scholastic aptitude and

Jefferies Unit Operator Woody Wadford points out historical images on display during a hydro facility tour.

achievement test scores, an extremely high dropout rate, and insufficient funding and resources to meet its needs.

The schools in the local communities represent the major pipeline for feeding the future work force for Santee Cooper, the communities we serve and the state of South Carolina.

"Educational improvement is an investment in our state's and our community's future and in the individuals who may have the opportunity to develop the professional, technical and creative skills needed to succeed in today's modern work environment," said Barbara Allen, Santee Cooper's director of educational programs. "For Santee Cooper it is the right thing to do in support of helping improve the quality of life for our communities and for our state.

"The success of each of these programs results directly from the commitment and dedication of employees who are willing to share their time and talents in working one-on-one and in with the community's schools and students. Through their participation, they become an important part of the educational experience for students, provide vital resources and assistance to the educators and become increasingly involved with the schools in the educational improvement process."

According to Allen, the efforts provided by Santee Cooper and its employees toward education are focused on helping stimulate young minds.

She noted it is very similar to a perspective expressed by publisher Malcolm S. Forbes, who said, "Education's purpose is to replace an empty mind with an open one."

Students display interest and enthusiasm in their experience with volunteers.

NEWSOURCE

Unit 3 to be Built at Cross Station

To meet the increasing demand for power, the Santee Cooper board of directors in May approved construcion of a third generating unit at the Cross Generating Station in Berkeley County.

The 500-megawatt unit, comparable in size to the two other units at Cross Station, will cost approximately $648 million. The new unit will begin commercial operation on Jan. 1, 2007 and no rate increase for customers is projected.

Based on load-forecast studies by utility analyst R.W. Beck Inc. of Orlando, Fla., Santee Cooper faces a generation shortfall for the 1.6 million South Carolinians receiving power directly or indirectly from the state-owned utility.

"If we do not construct additional generation, we will be 230 MW short by 2004 and 700 MW short by 2007," said President and CEO John Tiencken.

"This shortage is forecasted even with startup of the 800-MW Rainey Station in Anderson County.

"Our state continues to grow and with that growth comes the increasing demand for power. We must not allow ourselves to end up like California, which has not built a major generating station in 10 years and now finds itself with a shortage of electricity."

Three Units will be added at Rainey Station

Three additional gas-fired generating units will be constructed at Rainey Generating Station in Anderson County, where two units are already producing power. The additions were approved in November by Santee Cooper's board of directors.

The $120 million project will increase the station's generating capability from 800 to 1,040 MW.

The three new combustion-turbine units will have a generating capability of 80 MW each.

Construction will begin in late spring 2002 and the units are projected to go on line in January 2004.

The 500-MW unit began operation January 1. The two 150-MW units are projected to go on line by May. The station's cost, including the three additional units, is $517 million.

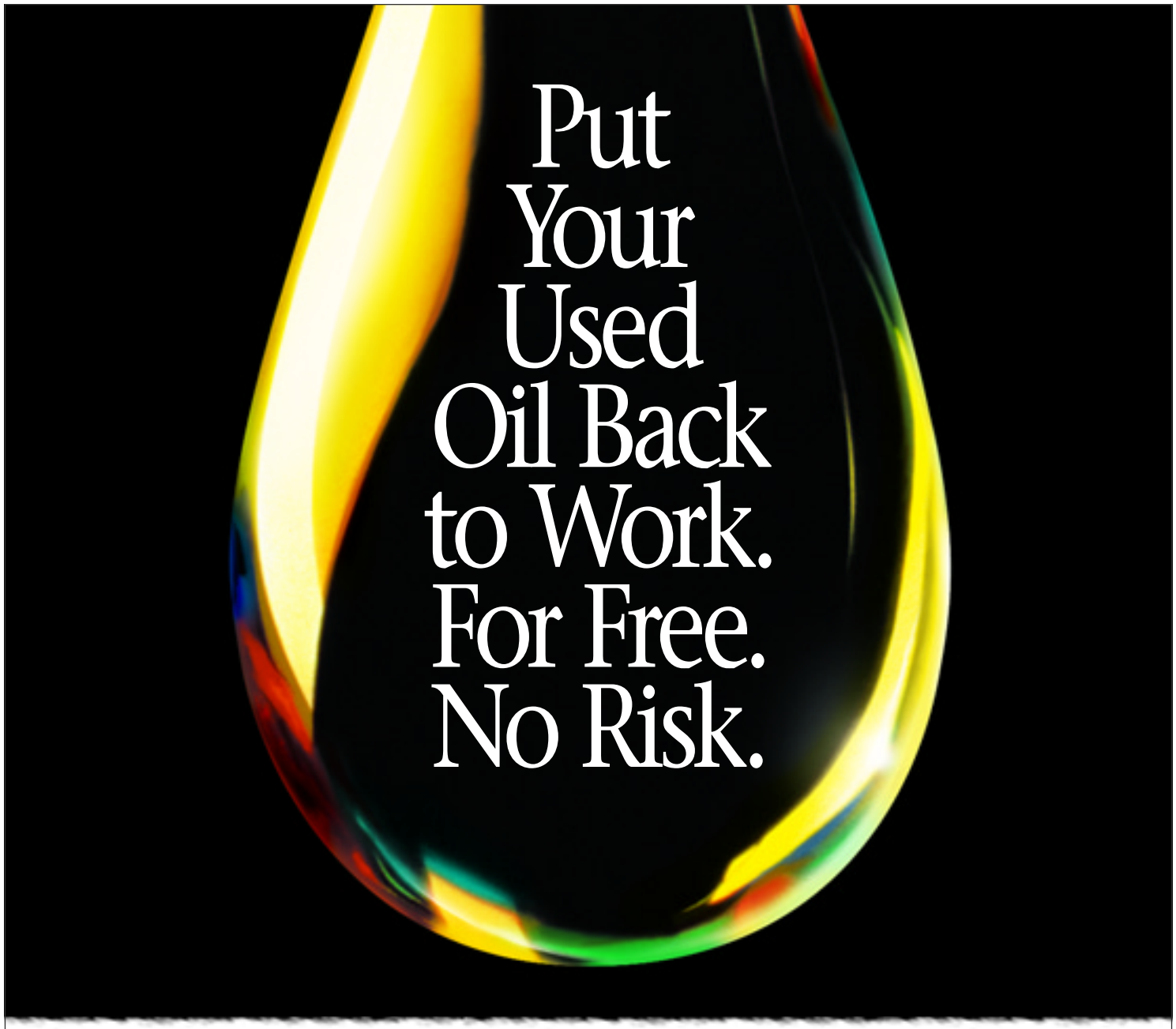
The station will employ approximately 40 full-time employees, including six needed for the three additional units.

Rainey Station combined cycle units that went on line January 1.

LEST WE FORGET...

Tattered and stained by more than a half-century of storage in a darkened file drawer, this 1940-era ink blotter delivers a resounding message from a time when America was at war and power was critical to the development of South Carolina.

The blotters were given to customers and friends to encourage patriotism and an appreciation of the value of Santee Cooper Power in the national defense.



If your business has gears or ball bearings, oil keeps it working. But are you geared up for the proper disposal of your used oil?

Santee Cooper can put your used oil back to work at no cost to you. Under our statewide "Give Oil For Energy Recovery" program, or GOFER, Santee Cooper will remove used oil from qualifying businesses at no cost. That's free. And we remove your risks!

Santee Cooper assumes responsibility for your used oil the moment we pump it into our trucks. If recycling your used oil to protect the environment and your business at no cost works for you, GOFER it! For information, call 1-800-753-2233.

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www.scgofer.org